ABSTRACT

In order to provide a manufacturing method of a semiconductor device which can improve the interconnection lifetime, while controlling the increase in resistance thereof, and, in addition, can raise the manufacturing stability; by applying a plasma treatment to the surface of a copper interconnection 17 with a source gas comprising a nitrogen element being used, a copper nitride layer 24 is formed, and thereafter a silicon nitride film 18 is formed. Hereat, under the copper nitride layer 24, a thin copper silicide layer 25 is formed.